

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application of

Krister HANSSON et al.

Serial No.: 10/578,484

Filed: May 8, 2006

For: **A PROCESS FOR THE MANUFACTURING OF A DECORATIVE LAMINATE
PROVIDED WITH AN ALIGNED SURFACE**

APPEAL BRIEF

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(i) REAL PARTY IN INTEREST

The real party in interest is the assignee of the inventors' interest, Pergo (Europe) AB, a company formed under the laws of Sweden having a principal address in Trelleborg, Sweden.

(ii) RELATED APPEALS AND INTERFERENCES

There is no known prior or pending appeals, judicial proceedings or interferences, known to Appellant, his assignee, or undersigned counsel which may be related to, directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

(iii) STATUS OF CLAIMS

Claims 2-7 and 9-27 are pending and are the subject of matter of this appeal.

Claims 1, 8, and all the other claims in the application have been cancelled.

(iv) STATUS OF AMENDMENTS

There has been no amendment filed subsequent to Final Rejection.

(v) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 20 is the sole independent claim and claims a process for the manufacture of a decorative board with joining edges (Specification, paragraph bridging pages 2-3). The process includes providing a décor layer and at least one paper layer impregnated with a thermosetting resin on a base layer (Specification, page 2, second full paragraph). The décor layer, paper layer and base are laminated under heat and pressure to form the board and machining at least an edge of the board (Specification, page 11, first full paragraph). The claim is presented in Jepson format, with the improvement comprising providing a position indicator on a décor section of the décor layer (Specification, paragraph bridging pages 2-3); detecting a position of a décor section on the décor layer by sensing a positioning indicator on the décor layer with a first camera (Specification, page 8, first full paragraph); sending data obtained from the first camera to a computer (Specification, page 8, first full paragraph) and utilizing the computer to guide a tool to machine an edge of the board (Specification, page 8, first full paragraph).

(vi) GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The sole rejection to be reviewed on appeal is the rejection of claims 2-7 and 9-27 under 35 U.S.C. 103(a) as being unpatentable over Giertz et al. (EP 1,153,736); Sjöberg et al. (U.S. 2003/018334) and Garcia (U.S. 2003/0205012).

(vii) ARGUMENT

In rejecting independent claim 20, the Examiner states that:

“Giertz discloses a process for the manufacture of a decorative board with thermosetting resin impregnated layers and a décor paper in the form of a sheet. The décor paper is placed on a surface of a base layer and bonded thereto by pressing under heat and pressure. The pressing utilizes a matrix (press foil) with a surface structure coinciding with the intended décor pattern and such is accurately placed on top of the décor paper before pressing and separated after pressing to obtain the desired décor surface (abstract). The matrix is further defined as either a plate or a pressed foil ([0009]). Giertz discloses that the structure foil web can be cut into sheets (i.e. multiple press foils) and positioned on the décor web. The Jepson claim language indicates the differences between the prior are not taken to be the board itself but rather the production methods, particularly the use of automated tools such as cameras and computers”.

While applicants appreciate the Examiner’s concession that Giertz, while teaching the general board, fails to disclose such automated alignment techniques, applicants note that Giertz does not teach the general board. Furthermore, the Jepson format is not an admission that the preamble is not part of the patentable subject matter.

In Giertz, there is no teaching of the formation of a board with joining edges, nor in fact is there even a teaching that any machining takes place on any part of the decorative laminate produced by Giertz.

The Examiner cites Sjöberg, as also drawn to a process for the manufacture of decorative laminate, as disclosing the use of vision systems and sensors, such as cameras, for use in lamination processes, citing paragraph [0019]. Although the Examiner makes a conclusory statement that “it would have been obvious to one having ordinary skill in the art at the time of the invention to have utilized the vision systems and sensors of Sjöberg with the invention of Giertz because such was known for allowing the identification of certain features for proper

positioning and the subsequent result of achieving an accurate match between the decor and surface structure” again citing paragraph [0019], such still does not teach nor suggest the claimed invention.

The proposed combination of Sjoberg and Giertz still lacks any teachings or suggestion to even machine the edges of the board to form joining edges, and especially lacks the use of a computer to use the data obtained by the camera, in order to guide tools for accomplishing such machining of an edge of the board.

In Sjoberg, paragraph [0019] only utilizes “so called vision systems comprising ccd cameras...to identify certain features of the décor and structure and use these as positioning means”. Sjoberg uses the positioning means to continuously guide the velocity of the structure foil so that an accurate match between the décor and surface structure is obtained [0019]. There is absolutely no disclosure in paragraph [0019] of Sjoberg (or elsewhere in the Sjoberg teachings), even in combination with Giertz, which teaches guiding a tool to machine an edge of the board. The Examiner’s reliance on paragraphs [0024] and [0028] of Sjoberg still finds wanting any teaching or suggestion to guide a tool to machine the edges of the board. Neither of these paragraphs has anything to do with machining an edge of the board nor do they even relate to the use of a ccd camera, as previously discussed in paragraph [0019] of Sjoberg.

Rejections based on 35 U.S.C. 103 (a) must rest on a factual basis; *In re Warner*, 371 F.2d1011(CCPA 1967).

In making such rejections, the Examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis; *Warner, supra* at 1017.

Here the Examiner has cited no reference teaching that a vision sensor, such as a camera, may have its data fed to a computer and utilizing the computer to guide a tool to machine an edges of a board.

In the complete absence of such a teaching, the Examiner merely speculates that such would be obvious; See the sentence bridging pages 5-6 of the Final Rejection. The Examiner's comments that "further tailoring and/or providing alternate automated means to satisfy the steps of the process that is already disclosed by Giertz/Sjoberg is a matter of obviousness since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art citing *In re Venner*, 120 USPQ 192." The citation of *In re Venner* is inappropriate, as are the Examiner's comments that the process disclosed by Giertz/Sjoberg has in fact been achieved by manual activity.

As noted above, neither Giertz, nor Sjoberg, teach any machining of the laminate formed by their respective processes to form joining edges. In the complete absence of any teaching of forming joining edges by the proposed combination of Giertz and Sjoberg, the Examiner proposes that an automated process for performing such would be obvious, when he has not even established a basis for showing such a process is performed by manual activity.

Apparently, recognizing these defects in his proposed combination of Giertz and Sjoberg, the Examiner now joins Garcia as:

"evidencing the assertion of obviousness is the teachings of Garcia whereby it is disclosed in the art of decorated laminates useful in flooring (the same general field of endeavor as both Sjoberg and Giertz) it was known to create a decorative substrate, cut the substrate into smaller pieces and accurately align them by the use of cutting, shaping and milling tools followed by the addition of alignment features for joining the individual subsets (i.e. panels) ([0059])".

However, the disclosure of Garcia in paragraph [0059], and elsewhere, does not support the Examiner's allegation of obviousness in the above-noted deficiencies found in the combination of Giertz and Sjoberg.

Garcia, in paragraph [0059] teaches that a large substrate of a size of 4 feet by 8 feet is cut and formed to produce individually embossed in registration laminates having accurately controlled dimensions and smooth edges. Cutting and forming is performed using shaping tools, milling tools, cutting tools, breaking tools and the like. Although Garcia states that "carefully

alignment techniques are utilized to avoid negatively affecting the embossed-in-registration motif" (emphasis added) he never discloses how such alignment techniques are achieved nor whether, nor what type of equipment is utilized. There is clearly no disclosure of the use of a sensor, such as cameras, or the use of the data from the camera fed to a computer which computer utilizes that data to guide a tool to machine an edge of the board, as required by the claim. In fact there is no disclosure of using careful techniques of cutting and/or forming, but only "careful alignment techniques are utilized to avoid negatively affecting the embossed-in registration motif". Lasers can be used to align parts, therefore there is no inherent disclosure that Garcia utilizes any of the chemical process steps. Thus, the proposed combination of Giertz, Sjoberg, even in view of Garcia, still does not teach one skilled in the art to do applicant has done i.e., use a camera to detect a position of a décor section on the décor layer by sensing a positioning indicator, sending data obtained from the camera to a computer, and utilizing the computer to guide a tool to machine an edge of the board, all as claimed in applicants' independent claim 20.

All of the dependent claims dependent directly, or indirectly, from independent claim 20 and therefore by statute (35 U.S.C. 112, fourth paragraph) incorporate all of the limitations of the claims from which they depend. Accordingly, each of the dependent claims is also separately patentable because the proposed combination of Giertz, Sjoberg and Garcia simply fails to teach the essence of applicants' invention i.e., the use of a camera and a computer to guide edge forming tools used to form joining edges on a decorative laminate board.

(viii) CONCLUSION

For the foregoing reasons, reversal of the rejection by the Board of appeal is respectfully requested.

(ix) CLAIMS APPENDIX

A copy of the Claims on Appeal can be found in the Claims Appendix.

(x) EVIDENCE APPENDIX

N/A

(xi) RELATED PROCEEDING APPENDIX

N/A

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'TP Pavelko', written over a horizontal line.

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Date: January 5, 2010
Atty Docket No. 8688.045.US0000

APPENDICES

The following Appendices are attached to and made a part of this brief:

Appendix A	Claims on Appeal
Appendix B	Evidence (N/A)
Appendix C	Related Proceedings (N/A)

APPENDIX A: Claims on Appeal

2. A process according to claim 20 wherein at least one wear layer is arranged on top of the decor layer in order to increase the wear resistance, that the at least one wear layer is arranged between the decor layer and the press plate or press foil during the lamination procedure.
3. A process according to claim 2 wherein the wear layer comprises at least one overlay paper which is impregnated with melamine-formaldehyde resin before the lamination procedure.
4. A process according to claim 3 wherein the at least one overlay paper further comprises hard particles with an average particle size in the range 50 nm - 150 μ m.
5. A process according to claim 4 wherein the uppermost surface of the overlay paper facing the press plate or press foil is provided with hard particles with an average particle size in the range 50 nm - 30 μ m.
6. A process according to claim 20 wherein the base layer comprises a particle board or a fibre board.
7. A process according to claim 20 wherein the base layer comprises a particle board or a fibre board with at least one base paper layer arranged thereon, the base paper layer being impregnated with a thermosetting resin selected from the group consisting of melamine-formaldehyde, phenol-formaldehyde, urea-formaldehyde and combinations thereof.
9. A process according to claim 20 wherein the decor layer has a longitudinal and a latitudinal direction, and that the decor layer contains longitudinal rows of longitudinally arranged panels.

10. A process according to claim 20 wherein the decor layer has a longitudinal and a latitudinal direction, and that the decor layer contains longitudinal rows of latitudinally arranged panels.
11. A process according to claim 9 wherein the panels have a rectangular shape.
12. A process according to claim 9 wherein the panels have a square shape.
13. A process according to claim 20 wherein the position indicator is selected from the group consisting of color dots, color lines, grid patterns holes, code lines, indentations, that said positioning means are arranged in a predetermined relation to the decor sections.
14. A process according to claim 8 wherein the positioning indicator is selected from the group consisting of color dots, color lines, grid patterns, holes, code lines, indentations, that said positioning means are arranged in a predetermined relation to the decor sections.
15. A process according to claim 20 wherein the positioning indicator is detected by the another camera for positioning of the press plates or press foils, and that the same positioning indicator is also used for machining at least the edge of the decorative board.
16. A process according to claim 15 wherein the panels are provided with joining elements at the edges, that the positioning indicator is used to accurately guide the milling of the edges, and thereby also the position of the joining element in relation to the decor.
17. A process according to claim 20 wherein the positions of the decor sections of the decor layer are detected by the first camera sending data input to a computer, that the data input from the first camera is used after the bonding for accurately guiding the positioning of tools selected

from the group consisting of cutting and milling tools used for at least one of cutting the decorative board and providing said decorative board with joining elements.

18. A process according to claim 17 wherein the first camera comprises a camera array and said camera array is further used for controlling the quality achieved; wherein the camera array comprises at least one matrix color camera for detecting color of the decor paper and at least one reflection camera for detecting the surface structure, that the data input from the two camera types are compared in a control computer for evaluation of alignment between decor and surface structure.

19. A process according to claim 18 wherein alignment evaluation data of the control computer is used by a computer for calculating statistical process guiding of the positioning of the press plates or press foils prior to the lamination step.

20. In a process for the manufacture of a decorative board with joining edges; said process comprising

providing a décor layer and at least one paper layer impregnated with a thermosetting resin on a base layer;
laminating the décor layer, paper layer and base unto the board layer under heat and pressure;
machining at least an edge of the board, the improvement comprising
providing a position indicator on the décor layer;
detecting a position of a décor section on the décor layer by sensing a positioning indicator on the décor layer with a first camera;
sending data obtained from the first camera to a computer; and
utilizing the computer to guide a tool to machine an edge of the board.

21. The process of claim 20 where the machining is milling and the tool is a milling tool.

22. The process of claim 20 when the machining is cutting and the tool is a cutting tool.
23. The process of claim 22 further comprising milling by the use of a milling tool.
24. The process of claim 20, further comprising applying a press plate or a press foil against an uppermost surface of the board during said bonding step to emboss a surface structure in register with a decor of the décor layer.
25. The process of claim 20, further comprises utilizing another camera to detect the position of a décor section on the décor layer and guiding the press foil in a longitudinal direction through tension control.
26. The process of claim 25, further comprising adjusting the latitudinal position of the press foil.
27. The process of claim 26 wherein the computer compares data from the first camera with the data from the another camera for evaluation of alignment between the décor layer and embossed surface structure prior to said machining step.

APPENDIX B: Evidence Appendix under 37 CFR §41.37(c)(1)(ix)

APPENDIX C: RELATED PROCEEDINGS

N/A